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EXAMINER

BLEVINS, JERRY M

ART UNIT PAPER NUMBER

2883

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/808,672

Applicant(s)

SCHWIEBERT ET AL.

Examiner

Jerry Martin Blevins

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.  
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-20 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 03/24/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03/24/2004.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

Claims 15, 17, and 19 are objected to because of the following informalities:

Regarding claim 15, the claimed "injection-molding" has no antecedent basis in the indicated base claim 13. Examiner interprets claim 15 to depend from claim 14.

Regarding claim 17, the claimed "optoelectronic subassembly" has no antecedent basis in the indicated base claim 15. Examiner interprets claim 17 to depend from claim 16.

Claim 19 is objected to based on its dependence from objected base claim 17.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent to Brezina et al., number 6,540,414.

Art Unit: 2883

Regarding claim 1, Brezina teaches a fiber optic module, comprising an electromagnetic interference (EMI) shield (Figures 9-11, element 16); and a first housing (Figures 1-4 and 7, element 10) insert molded with the EMI shield (column 11, lines 9-51).

Regarding claim 11, Brezina teaches a method for making a fiber optic module, comprising forming an electromagnetic interference (EMI) shield (Figures 9-11, element 16); and insert molding a first housing (Figures 1-4 and 7, element 10) with the EMI shield (column 11, lines 9-51).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4, 12-14, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brezina in view of US Patent to Svarfvar et al., number 6,738,265.

Regarding claim 2, Brezina teaches the limitations of the base claim 1. Brezina also teaches that the EMI shield comprises conductive contact fingers (Figures 9 and 10, element 17 and column 11, lines 26-45). Brezina does not teach a conductive mesh. Svarfvar teaches an EMI shield (Figures 10 and 11 and column 5, line 42 – column 6, line 28) comprising a conductive mesh (elements 70 and 82, respectively). It would have been obvious to one of ordinary skill in the art at the time of the invention to

Art Unit: 2883

modify Brezina with the conductive mesh EMI shield of Svarfvar. The motivation would have been to improve efficiency and reduce costs of the EMI shield (Svarfvar, column 2, lines 32 and 33).

Regarding claim 12, Brezina teaches the limitations of the base claim 11.

Brezina also teaches that the forming an EMI shield comprises forming conductive contact fingers (Figures 9 and 10, element 17 and column 11, lines 26-45). Brezina does not teach forming a conductive mesh. Svarfvar teaches an EMI shield (Figures 10 and 11 and column 5, line 42 – column 6, line 28) comprising a conductive mesh (elements 70 and 82, respectively). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Brezina with the formation of the conductive mesh EMI shield of Svarfvar. The motivation would have been to improve efficiency and reduce costs of the EMI shield (Svarfvar, column 2, lines 32 and 33).

Regarding claim 3, Brezina in view of Svarfvar teaches the limitations of the base claim 2. Brezina does not teach that the EMI shield comprises conductive shield sidewalls around the mesh, the contact fingers extending from the shield sidewalls. Svarfvar teaches that the EMI shield comprises conductive shield sidewalls around the mesh (Figure 9, elements 46, 48, 50 and column 5, lines 42-67). Svarfvar also teaches contact fingers (Figure 19, element 226 and column 8, line 49 – column 9, line 5) extending from the sidewalls. It would have been obvious to one of ordinary skill in the art to modify Brezina with the conductive shield sidewalls and extending contact fingers of Svarfvar. The motivation would have been to improve electrical contact capabilities

Art Unit: 2883

for the purpose of effectuating the necessary EMI shielding (Svarfvar, column 5, lines 59-64).

Regarding claim 13, Brezina in view of Svarfvar teaches the limitations of the base claim 12. Brezina does not teach that forming the EMI shield comprises forming conductive shield sidewalls around the mesh, wherein the forming contact fingers comprises forming contact fingers extending from the shield sidewalls. Svarfvar teaches that the EMI shield comprises conductive shield sidewalls (Figure 9, elements 46, 48, 50 and column 5, lines 42-67). Svarfvar also teaches contact fingers (Figure 19, element 226 and column 8, line 49 – column 9, line 5) extending from the sidewalls. It would have been obvious to one of ordinary skill in the art to modify Brezina with the formation of conductive shield sidewalls and the formation of extending contact fingers of Svarfvar. The motivation would have been to improve electrical contact capabilities for the purpose of effectuating the necessary EMI shielding (Svarfvar, column 5, lines 59-64).

Regarding claims 4 and 14, Brezina in view of Svarfvar teaches the limitations of the base claims 2 and 12, respectively. Brezina does not teach that the first housing is injection molded through the mesh of the EMI shield. Svarfvar teaches that the housing is injection molded through the mesh of the EMI shield (Figure 17 and column 8, lines 5-24). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brezina with the injection molded housing of Svarfvar. The motivation would have been to improve electrical contact capabilities for the purpose of effectuating the necessary EMI shielding (Svarfvar, column 8, lines 14-24).

Regarding claim 16, Brezina in view of Svarfvar teaches the limitations of the base claim 14. Brezina also teaches mounting an optoelectronic subassembly in the first housing (column 5, lines 24-35); and mounting a second housing to the first housing to enclose the optoelectronic subassembly (column 4, lines 50-59 and column 11, lines 46-51).

Regarding claim 17, Brezina in view of Svarfvar teaches the limitations of the examiner interpreted base claim 16. Brezina also teaches that the optoelectronic subassembly comprises a circuit board; at least one optical subassembly mounted on the circuit board; and at least one connector interface (column 6, lines 28-40 and column 19, lines 13-28).

Regarding claim 18, Brezina in view of Svarfvar teaches the limitations of the base claim 16. Brezina also teaches that the mounting an optoelectronic subassembly in the first housing comprises receiving a fiber optic connector (column 3, lines 34-54 and column 8, line 50 – column 9, line 11). Brezina does not teach that the mesh defines at least one opening and that the mounting an optoelectronic subassembly in the first housing comprises abutting the at least one connector interface to the mesh about at the at least one opening. Svarfvar teaches that the mesh defines at least one opening (Figures 1-7). Svarfvar also teaches abutting at least one connector interface to the mesh about at the at least one opening for receiving a connector (Figure 19 and column 8, line 49 – column 9, line 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brezina with the mesh opening and interface abutting to about at least the mesh opening of Svarfvar. The motivation would

Art Unit: 2883

have been to improve connection to the fiber optic connector (Brezina, column 3, lines 34-54 and column 8, line 50 – column 9, line 11).

Claims 5-9, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brezina in view of Svarfvar as applied to claims 4, 14, and 17 above, and further in view of US Patent to Chiu et al., number 6,832,856.

Regarding claim 5, Brezina in view of Svarfvar teaches the limitations of the base claim 4. Brezina also teaches that the first housing comprises a non-conductive housing floor and non-conductive housing sidewalls (Figures 1-10). Brezina does not teach a non-conductive nose defining at least one receptacle, wherein the housing floor and the housing sidewalls are injection molded through the mesh of the EMI shield to be integral with the nose and so that the shield sidewalls and the contact fingers at least partially surround the nose. Chiu teaches a non-conductive nose defining at least one receptacle (Figures 10a-g, element 704), wherein an EMI shield (708) is integral with the nose so that the shield sidewalls (708) and the contact fingers (714) at least partially surround the nose. As stated above in the rejections of claims 4 and 14, Svarfvar teaches that the housing is injection molded through the mesh of the EMI shield (Figure 17 and column 8, lines 5-24). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brezina with the non-conductive nose of Chiu. The motivation would have been to improve the ability to remove faulty modules from the receptacle (Chiu, column 1, line 42 – column 2, line 22).

Regarding claim 15, Brezina in view of Svarfvar teaches the limitations of the examiner interpreted base claim 14. Brezina also teaches that the injection molding a



Art Unit: 2883

first housing comprises forming a non-conductive housing floor and forming non-conductive housing sidewalls (Figures 1-10). Brezina does not teach forming a non-conductive nose defining at least one receptacle, wherein the housing floor and the housing sidewalls are injection molded through the mesh of the EMI shield to be integral with the nose and so that the shield sidewalls and the contact fingers at least partially surround the nose. Chiu teaches a non-conductive nose defining at least one receptacle (Figures 10a-g, element 704), wherein an EMI shield (708) is integral with the nose so that the shield sidewalls (708) and the contact fingers (714) at least partially surround the nose. As stated above in the rejections of claims 4 and 14, Svarfvar teaches that the housing is injection molded through the mesh of the EMI shield (Figure 17 and column 8, lines 5-24). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brezina with the non-conductive nose of Chiu. The motivation would have been to improve the ability to remove faulty modules from the receptacle (Chiu, column 1, line 42 – column 2, line 22).

Regarding claim 6, Brezina in view of Svarfvar and further in view of Chiu teaches the limitations of the base claim 5. Brezina also teaches an optoelectronic subassembly mounted in the first housing (column 5, lines 24-35); and a second housing mounted to the first housing to enclose the optoelectronic subassembly (column 4, lines 50-59 and column 11, lines 46-51).

Regarding claim 7, Brezina in view of Svarfvar and further in view of Chiu teaches the limitations of the base claim 16. Brezina also teaches that the optoelectronic subassembly comprises a circuit board; at least one optical subassembly

Art Unit: 2883

mounted on the circuit board; and at least one connector interface (column 6, lines 28-40 and column 19, lines 13-28).

Regarding claim 8, Brezina in view of Svarfvar and further in view of Chiu teaches the limitations of the base claim 7. Brezina also teaches receiving a fiber optic connector (column 3, lines 34-54 and column 8, line 50 – column 9, line 11). Brezina does not teach that the mesh defines at least one opening and that at least one connector interface abuts the mesh about at the at least one opening. Svarfvar teaches that the mesh defines at least one opening (Figures 1-7). Svarfvar also teaches abutting at least one connector interface to the mesh about at the at least one opening for receiving a connector (Figure 19 and column 8, line 49 – column 9, line 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brezina with the mesh opening and interface abutting to about at least the mesh opening of Svarfvar. The motivation would have been to improve connection to the fiber optic connector (Brezina, column 3, lines 34-54 and column 8, line 50 – column 9, line 11).

Regarding claims 9 and 19, Brezina in view of Svarfvar and further in view of Chiu teaches the limitations of the base claims 7 and 17, respectively. Brezina does not teach that the at least one connector interface is selected from the group consisting of LC, SC and MTRJ connector interfaces. Chiu teaches a connector interface selected from the group consisting of LC, SC and MTRJ connector interfaces (column 5, lines 47-65). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brezina with the LC, SC, and MTRJ connector interfaces of Chiu.

Art Unit: 2883

The motivation would have been to improve alignment and coupling of optical fibers into the module (Chiu, column 5, lines 36-46).

Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brezina in view of US Pre Grant Publication to Liu et al., number 2005/0152701.

Regarding claims 10 and 20, Brezina teaches the limitations of the base claims 1 and 11, respectively. Brezina does not teach that the module is selected from the group consisting of a SFP transceiver module, a GBIC transceiver module and a 1x9 transceiver module. Liu teaches a SFP transceiver module (page 3, paragraph 29). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brezina with the SFP transceiver module of Liu. The motivation would have been to control the emission of EMI for a variety of optoelectronic devices (Liu, page 3, paragraph 29).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2883

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB



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